

WHAT IS CLAIMED IS:

1. An image forming apparatus that processes data described in a predetermined descriptive language, the apparatus comprising:
  - 5 a reading module that reads placement information of an image including a storage location of image data of the image, a size of the image and forming information of the image described in a predetermined descriptive language;
  - an image storage location interpretation module that interprets the  
10 storage location of the image data read out;
  - an image size interpretation module that interprets the size of the image read out;
  - an image data obtaining module that obtains the image data based on the storage location of the image data interpreted;
  - 15 an image region determining module that determines an image forming rectangular region based on the image size interpreted;
  - an image modification processing module that performs an enlargement or reduction processing on the image data obtained such that the image obtained can be contained in the image forming rectangular region;
  - 20 an image drawing module that draws the image with the enlargement or reduction processing being rendered in the image forming rectangular region;

and

an image forming information interpreting module that interprets the image forming information obtained,

wherein the image modification processing module includes an image forming processing module that renders an image forming processing on the image data based on the image forming information interpreted.

2. An image forming apparatus that processes data described in a predetermined descriptive language, the apparatus comprising:

an image storage location interpreting module that interprets a storage location of image data of an image described according to the predetermined descriptive language;

an image data obtaining module that obtains the image data based on the storage location of the image data interpreted by the image storage location interpreting module;

a reading module that reads and obtains image forming information of the image from the data described in the predetermined descriptive language;

an image forming information interpreting module that interprets the image forming information obtained by the reading module; and

an image forming processing module that renders an image forming processing on the image data based on the image forming information

interpreted by the image forming information interpreting module.

3. An image forming apparatus according to claim 1, wherein the image forming information includes image trimming information, the image forming information interpreting module includes an image trimming information interpreting module that interprets the image trimming information obtained, and the image forming processing module includes an image trimming processing module that renders a trimming processing on the image data based on the image trimming information interpreted.

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4. An image forming apparatus according to claim 3, wherein the image trimming information is composed of a numerical value indicative of a coordinate of a left side of the image data, a numerical value indicative of a coordinate of an upper side of the image data, a numerical value indicative of a width of the image data, and a numerical value indicative of a height of the image data.

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5. An image forming apparatus according to claim 1, wherein the image forming information includes image flipping information, the image forming information interpreting module includes an image flipping information interpreting module that interprets the image flipping information

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obtained, and the image forming processing module includes an image flipping processing module that renders an image flipping processing on the image data based on the image flipping information interpreted.

5           6.     An image forming apparatus according to claim 5, wherein the image flipping information includes a character string representative of a flipping about one of a horizontal axis and a vertical axis.

          7.     An image forming apparatus according to claim 1, wherein the  
10 image forming information includes image rotation angle, the image forming information interpreting module includes an image rotation angle interpreting module that interprets the image rotation angle obtained, and the image forming processing module includes an image rotation processing module that renders an image rotation processing on the image data based on the image  
15 rotation angle interpreted.

          8.     An image forming apparatus according to claim 7, wherein the image rotation angle is expressed in units of degrees.

20           9.     An image forming apparatus according to claim 1, wherein the image forming information includes image aspect ratio maintaining

information, the image forming information interpreting module includes an image aspect ratio maintaining information interpreting module that interprets the image aspect ratio maintaining information obtained, and the image forming processing module includes an image aspect ratio maintaining processing module that renders an image aspect ratio maintaining processing on the image data based on the image aspect ratio maintaining information interpreted.

10. An image forming apparatus according to claim 9, wherein the image aspect ratio maintaining information is composed of a character string including positional information indicative of where the image data is arranged in the rectangular image forming region and selection information indicative of whether or not a margin blank area is to be created in the rectangular image forming region.

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11. An image forming apparatus according to claim 1, wherein the image forming module executes a trimming processing, a flipping processing, a rotation processing, and an image aspect ratio maintaining processing in this order.

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12. An image forming apparatus according to claim 1, wherein the

descriptive language is an XML (Extensible Markup Language) standard specification.

13. An image forming apparatus according to claim 12, wherein the  
5 descriptive language is an SVG (Scalable Vector Graphics) standard  
specification.

14. An image forming apparatus according to claim 12, wherein the  
descriptive language is an XHTML (Extensible Hyper Text Markup Language)  
10 standard specification.

15. An image forming apparatus according to claim 1, comprising an  
image processing apparatus.

16. An image forming apparatus according to claim 1, comprising a  
15 printing apparatus.

17. An image forming apparatus according to claim 2, comprising an  
image processing apparatus.

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18. An image forming apparatus according to claim 2, comprising a

printing apparatus.

19. An image forming method that processes data described in a predetermined descriptive language, the image forming method comprising:

5 a reading step of reading placement information of an image including a storage location of image data of the image, a size of the image and forming information of the image described in a predetermined descriptive language;

an image storage location interpretation step of interpreting the storage location of the image data read;

10 an image size interpretation step of interpreting the size of the image read;

an image data obtaining step of obtaining the image data based on the storage location of the image data interpreted;

15 an image region determining step of determining an image forming rectangular region based on the image size interpreted;

an image modification processing step of rendering an enlargement or reduction processing on the image data obtained such that the image obtained is contained in the image forming rectangular region;

20 an image drawing step of drawing the image with the enlargement or reduction processing being rendered in the image forming rectangular region; and

an image forming information interpreting step of interpreting the image forming information obtained,

wherein the image modification processing step includes an image forming processing step that renders an image forming processing on the image data based on the image forming information interpreted.

20. An image forming method that processes data described in a predetermined descriptive language, the image forming method comprising:

an image storage location interpreting step of interpreting a storage location of image data of an image described according to the predetermined descriptive language;

an image data obtaining step of obtaining the image data based on the storage location of the image data interpreted in the image storage location interpreting step;

15 a reading step of reading and obtaining image forming information of the image from the data described in the predetermined descriptive language;

an image forming information interpreting step of interpreting the image forming information obtained in the reading step; and

an image forming processing step of rendering an image forming processing on the image data based on the image forming information interpreted in the image forming information interpreting step.



21. An image forming method according to claim 20, wherein the image forming information includes image trimming information, the image forming information interpreting step includes an image trimming information interpreting step that interprets the image trimming information obtained, and  
5 the image forming processing step includes an image trimming processing step that renders a trimming processing on the image data based on the image trimming information interpreted.

10 22. An image forming method according to claim 21, wherein the image trimming information is composed of a numerical value indicative of a coordinate of a left side of the image data, a numerical value indicative of a coordinate of an upper side of the image data, a numerical value indicative of a width of the image data, and a numerical value indicative of a height of the  
15 image data.

23. An image forming method according to claim 20 wherein the image forming information includes image flipping information, the image forming information interpreting step includes an image flipping information interpreting step that interprets the image flipping information obtained, and  
20 the image forming processing step includes an image flipping processing step

that renders an image flipping processing on the image data based on the image flipping information interpreted.

24. An image forming method according to claim 23, wherein the  
5 image flipping information includes a character string representative of a flipping about one of a horizontal axis and a vertical axis.

25. An image forming method according to claim 20, wherein the  
image forming information includes image rotation angle, the image forming  
10 information interpreting step includes an image rotation angle interpreting step that interprets the image rotation angle obtained, and the image forming processing step includes an image rotation processing step that renders an image rotation processing on the image data based on the image rotation angle interpreted.

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26. An image forming method according to claim 25, wherein the image rotation angle is expressed in units of degrees.

27. An image forming apparatus according to claim 20, wherein the  
20 image forming information includes image aspect ratio maintaining information, the image forming information interpreting step includes an

image aspect ratio maintaining information interpreting step that interprets the image aspect ratio maintaining information obtained, and the image forming processing step includes an image aspect ratio maintaining processing step that renders an image aspect ratio maintaining processing on the image data based on the image aspect ratio maintaining information interpreted.

28. An image forming method according to claim 27, wherein the image aspect ratio maintaining information is composed of a character string including positional information indicative of where the image data is arranged in the rectangular image forming region and selection information indicative of whether or not a margin blank area is to be created in the rectangular image forming region.

29. An image forming method according to claim 20, wherein the image forming step executes a trimming processing, a flipping processing, a rotation processing, and an image aspect ratio maintaining processing in this order.

30. An image forming method according to claim 20, wherein the descriptive language is an XML (Extensible Markup Language) standard specification.

31. An image forming method according to claim 30, wherein the descriptive language is an SVG (Scalable Vector Graphics) standard specification.

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32. An image forming method according to claim 30, wherein the descriptive language is an XHTML (Extensible Hyper Text Markup Language) standard specification.

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33. An image forming method according to claim 19, comprising an image processing method.

34. An image forming method according to claim 19, comprising a printing method.

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35. An image forming apparatus according to claim 20, comprising an image processing method.

36. An image forming apparatus according to claim 20, comprising a printing method.

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37. A computer readable storage medium that stores an image forming program, the image forming program comprising:

a reading step of reading placement information of an image including a storage location of image data of the image, a size of the image and forming information of the image described in a predetermined descriptive language;

an image storage location interpretation step of interpreting the storage location of the image data read;

an image size interpretation step of interpreting the size of the image read;

an image data obtaining step of obtaining the image data based on the storage location of the image data interpreted;

an image region determining step of determining an image forming rectangular region based on the image size interpreted;

an image modification processing step of rendering an enlargement or reduction processing on the image data obtained such that the image obtained is contained in the image forming rectangular region;

an image drawing step of drawing the image with the enlargement or reduction processing being rendered in the image forming rectangular region; and

an image forming information interpreting step of interpreting the image forming information obtained,

wherein the image modification processing step includes an image forming processing step that renders an image forming processing on the image data based on the image forming information interpreted.

5           38.   A computer readable storage medium that stores an image forming program that makes a computer to execute an image forming method that processes data described in a predetermined descriptive language, the computer readable storage medium comprising:

          an image storage location interpreting step of interpreting a storage  
10   location of image data of an image described according to the predetermined descriptive language;

          an image data obtaining step of obtaining the image data based on the storage location of the image data interpreted in the image storage location interpreting step;

15           a reading step of reading and obtaining image forming information of the image from the data described in the predetermined descriptive language;

          an image forming information interpreting step of interpreting the image forming information obtained in the reading step; and

          an image forming processing step of rendering an image forming  
20   processing on the image data based on the image forming information interpreted in the image forming information interpreting step.

39. An image forming apparatus which interprets commands to process forming of an image and executes said commands, the image forming apparatus comprising:

reading means for reading said commands, wherein said commands  
5 include at least one of a command to instruct to trim said image, a command to instruct to enlarge the size of said image and a command to instruct to rotate said image, and said commands are input in said reading means without an order of execution of the commands being determined; and

control means for selecting the command to instruct to trim said image  
10 to be executed firstly from said commands read by said reading means regardless of said order of inputting said commands in said reading means.

40. An image forming apparatus which interprets commands to process forming of an image and executes said commands, the image forming  
15 apparatus comprising:

reading means for reading said commands, wherein said commands  
include at least one of a command to instruct to trim said image, a command to instruct to enlarge the size of said image and a command to instruct to rotate said image, and said commands are input in said reading means without an  
20 order of execution of the commands being determined; and

control means for selecting the command to instruct to rotate said image to be executed lastly from said commands read by said reading means regardless of said order of inputting said commands in said reading means.

5           41.   An image forming method which interprets commands to process forming of an image and executes said commands, the image forming method comprising:

          a reading step of reading said commands, wherein said commands include at least one of a command to instruct to trim said image, a command to  
10   instruct to enlarge the size of said image and a command to instruct to rotate said image, and said commands are input in said reading step without an order of execution of the commands being determined; and

          a selecting step of selecting the command to instruct to trim said image to be executed firstly from said commands read in said reading step regardless  
15   of said order of inputting said commands in said reading means.

          42.   An image forming method which interprets commands to process forming of an image and executes said commands, the image forming method comprising:

20           a reading step of reading said commands, wherein said commands include at least one of a command to instruct to trim said image, a command to



instruct to enlarge the size of said image and a command to instruct to rotate said image, and said commands are input in said reading step without an order of execution of the commands being determined; and

- a selecting step of selecting the command to instruct to rotate said image
- 5 to be executed lastly from said commands read in said reading step regardless of said order of inputting said commands in said reading means.